

# Bay Area Climate & Energy Resilience Project

June 3, 2014

## Bay Area Climate Adaptation & Resilience

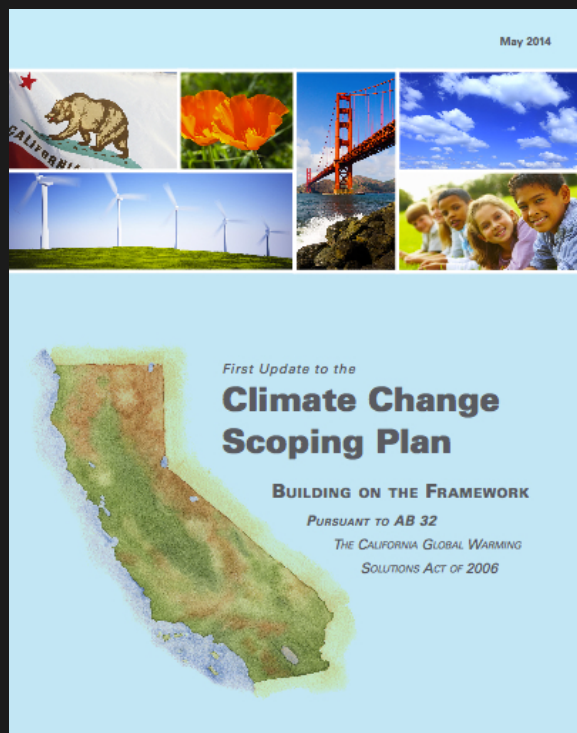


### Nine County-Level Snapshots

### Projects, Plans, Structures & Needs

Bay Area Climate & Energy Resilience Project  
March 2014

# Momentum?



© CBS  
**money watch**

Markets | Investing | Tech | Leadership

DOW	16743.63	S&P 500	1924.97
▲ +26.46	+0.16%	▲ +1.40	+0.07%

By AIMEE PICCHI / MONEYWATCH / May 19, 2014, 1:05 PM

## Not ready for climate change? Your town may get sued

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As experts warn that every continent will be impacted by climate change, there's yet another danger on the horizon: Getting sued over failing to prepare for worsening weather.

Farmers Insurance is suing the city of Chicago and about 200 local municipalities for allegedly failing to adequately prepare for the impact of climate change, in what's described as the first-of-its-kind legal argument. At the heart of the class-action lawsuits is a storm that hit the Chicago area on April 17, 2013, described by CBS station WBBM as so bad that some neighborhoods **were only navigable by boat**. The storm also shut down major expressways and flooded hundreds of basements and streets.

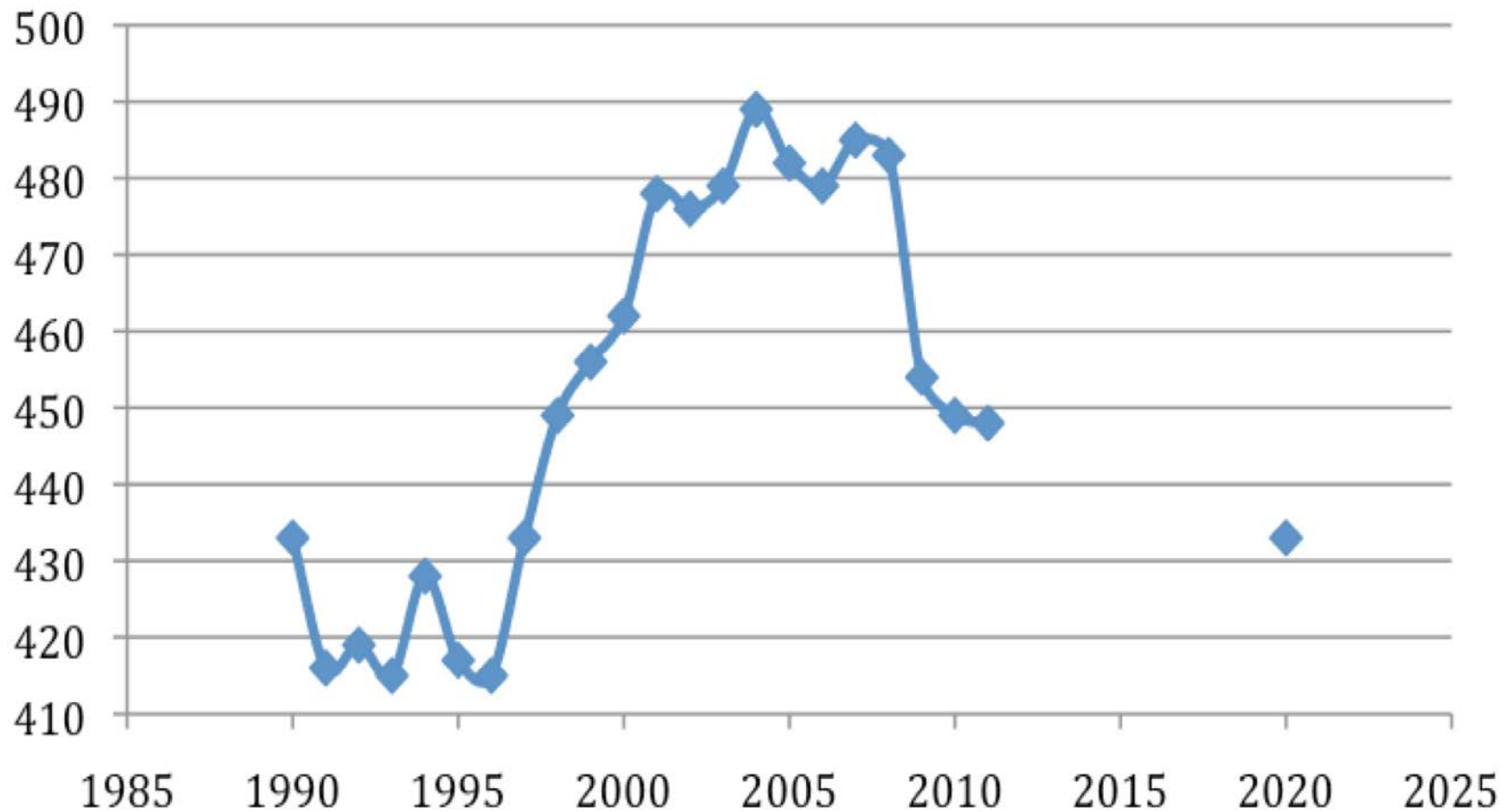
## The Washington Post

### Wonkbook: Obama's new EPA rule won't save the world, and it won't kill the economy

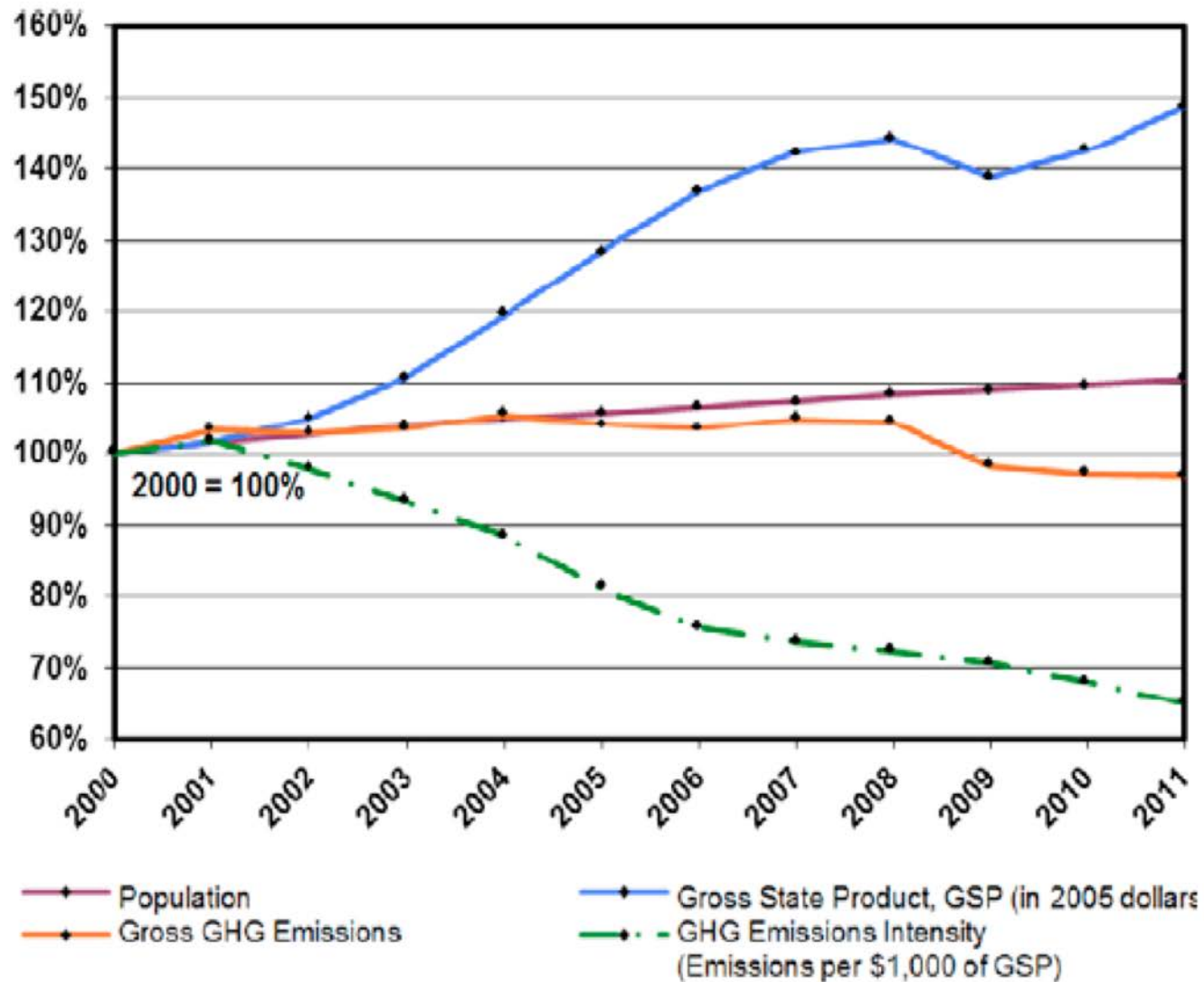
BY PUNEET KOLLIPARA June 3 at 8:29 am

Welcome to Wonkbook, Wonkblog's morning policy news primer by Puneet Kollipara. To subscribe by e-mail, click [here](#). Send comments, criticism or ideas to Wonkbook at [Washpost dot com](#). To read more by the Wonkblog team, click [here](#).

## California GHGs 1990-2020

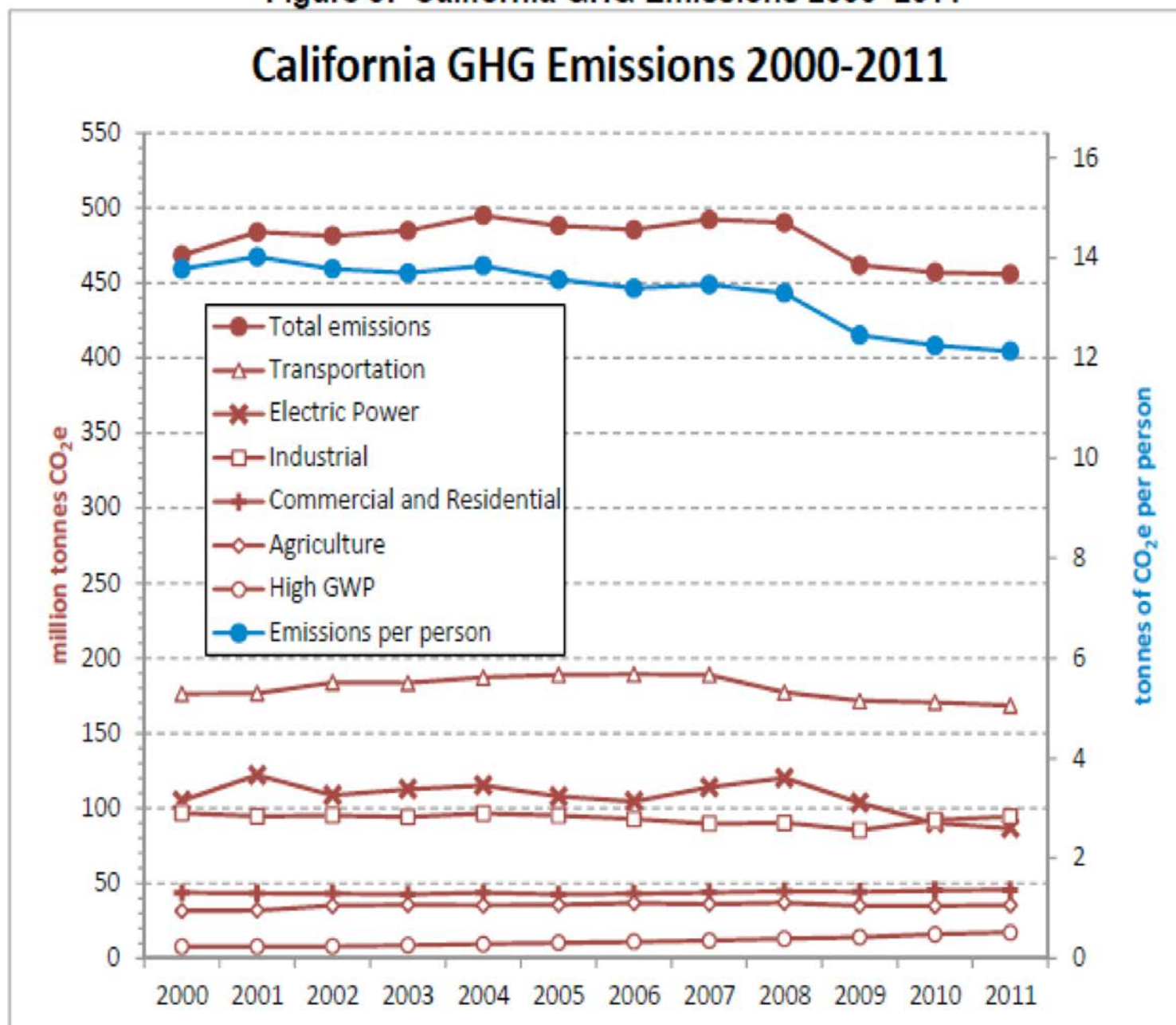


**Trends in California Population, Economy, Greenhouse Gas Emissions,  
and Emissions Intensity: 2000 - 2011**  
(Relative to 2000)

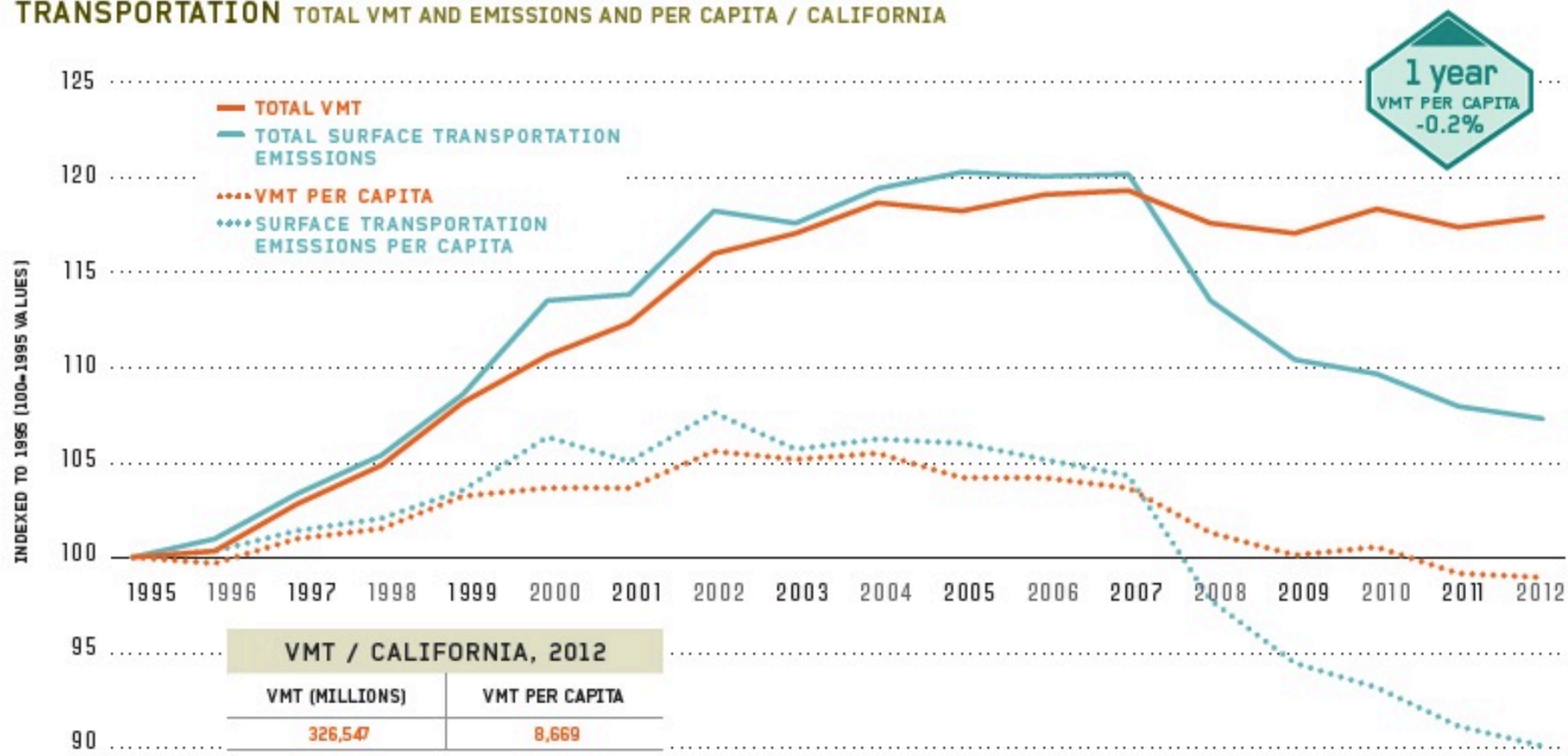


Source: ARB, 2013

Figure 5: California GHG Emissions 2000–2011



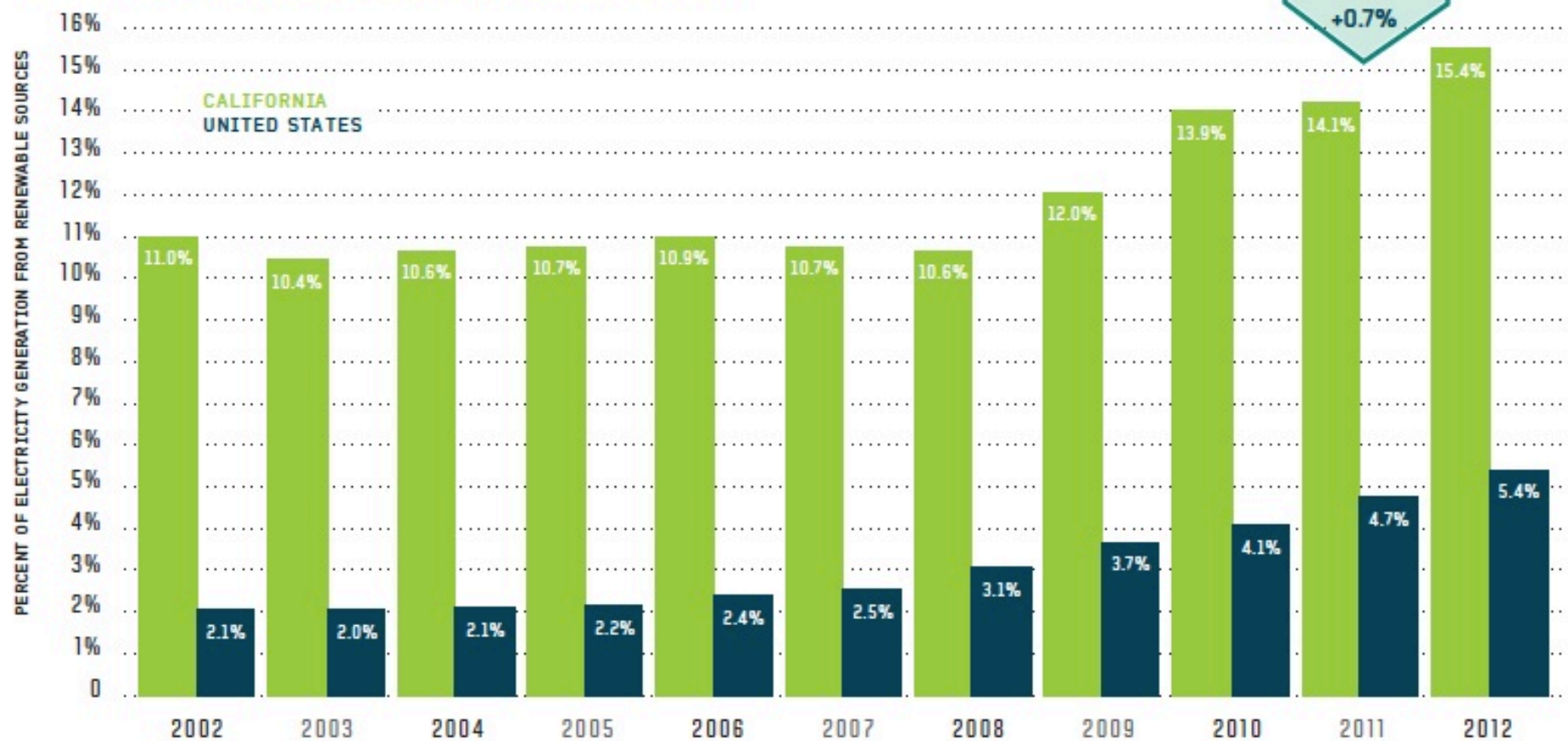
**FIGURE 21. VEHICLE MILES TRAVELED AND GREENHOUSE GAS EMISSIONS FROM SURFACE TRANSPORTATION** TOTAL VMT AND EMISSIONS AND PER CAPITA / CALIFORNIA



NEXT 10 CALIFORNIA GREEN INNOVATION INDEX. Data Source: California Air Resources Board, California Greenhouse Gas Inventory - by Sector and Activity; California Department of Transportation; California Department of Finance. Analysis: Collaborative Economics

**Next 10 Green Innovation Index 2014**

**FIGURE 14. PERCENT OF TOTAL ELECTRICITY GENERATION FROM RENEWABLE SOURCES CALIFORNIA AND UNITED STATES**

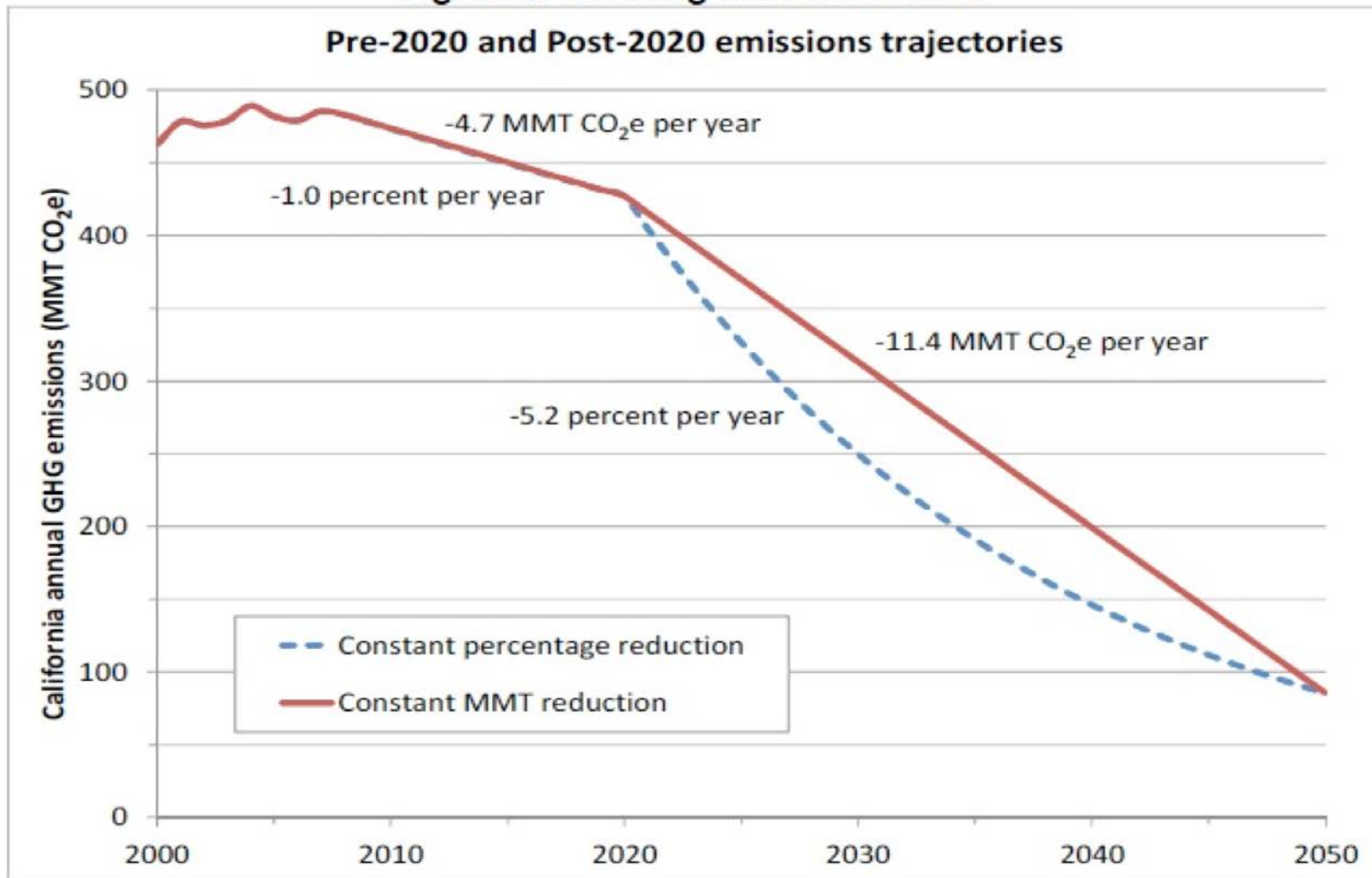


NEXT 10 CALIFORNIA GREEN INNOVATION INDEX. Note: Renewables do not include large hydro. Data Source: California Energy Commission; Energy Information Administration, U.S. Department of Energy. Analysis: Collaborative Economics

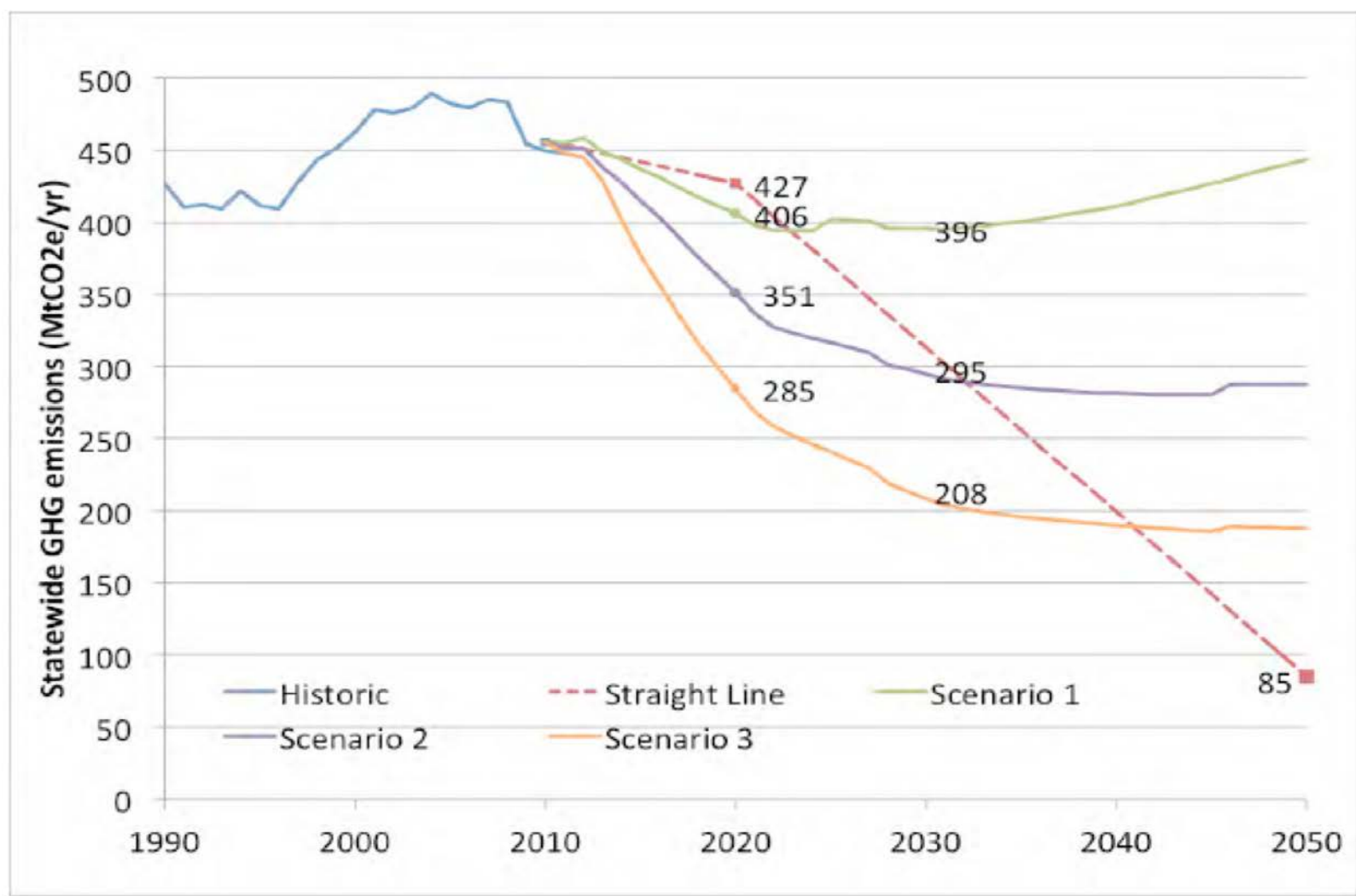
**Next 10 Green Innovation Index 2014**

**Figure 6: Framing the Path to 2050**

**Pre-2020 and Post-2020 emissions trajectories**



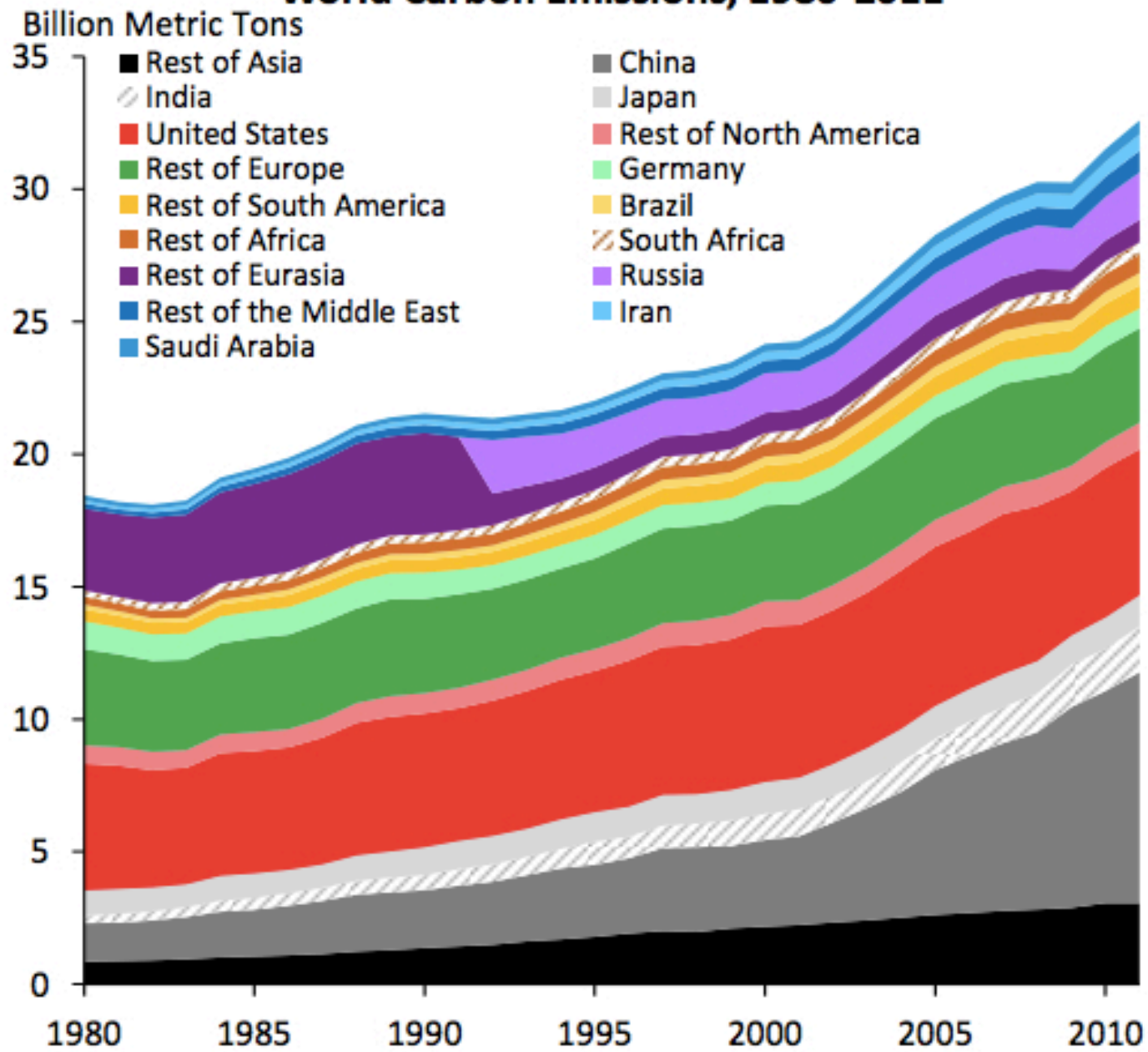
**CARB**

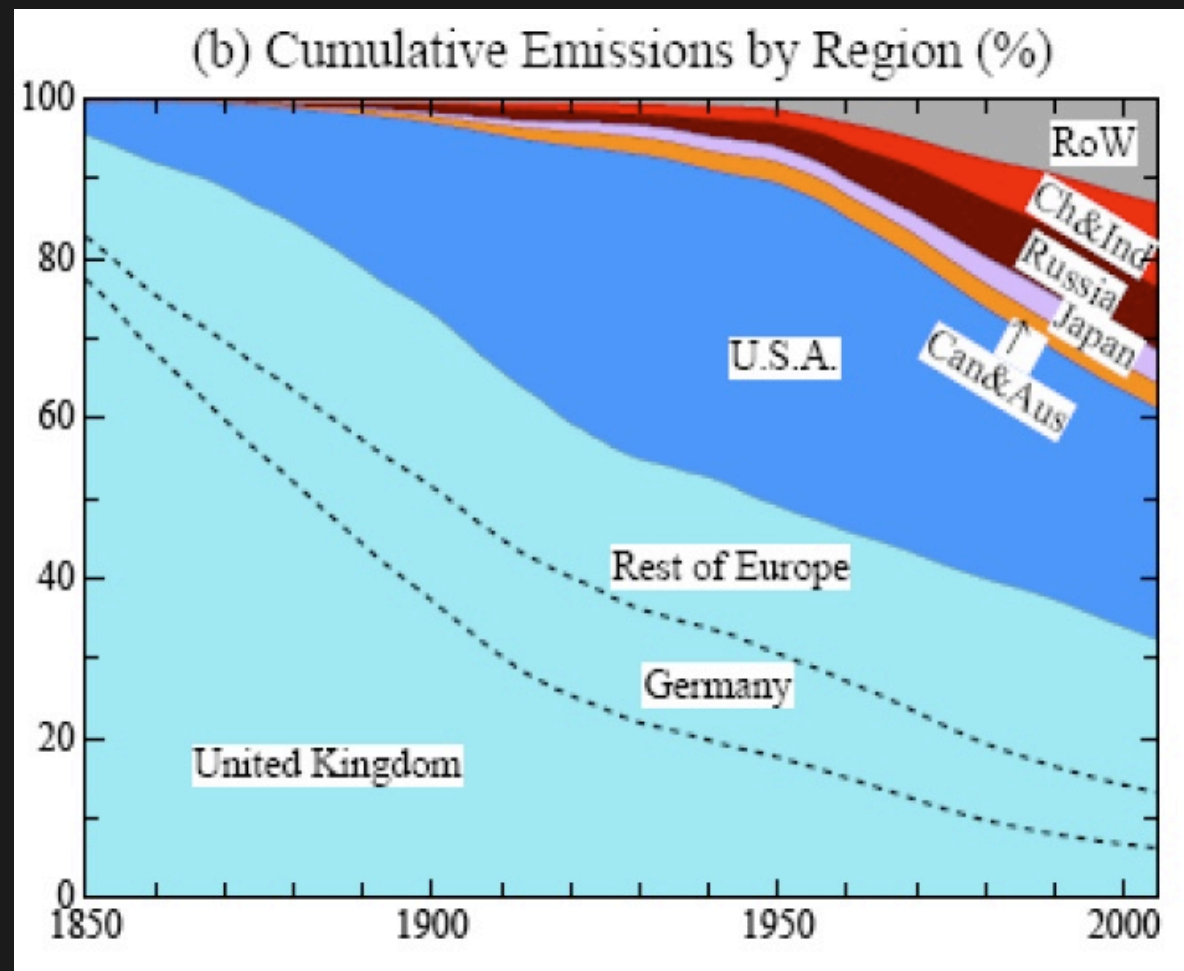
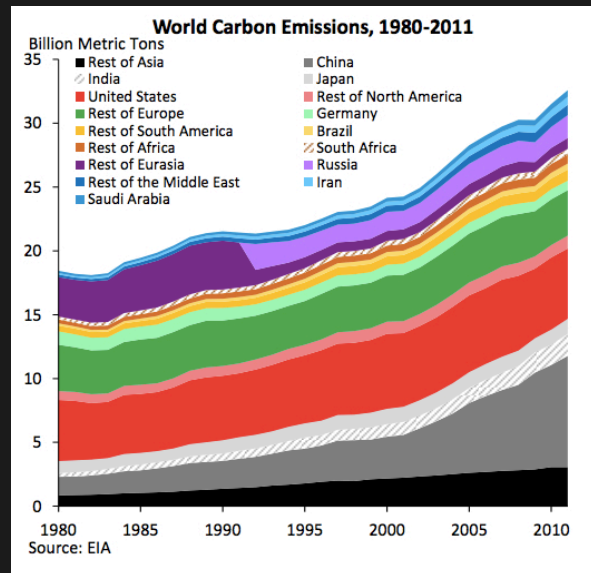


**Comparison of GHG emissions by Scenario, along with historical and “straight-line” connections between 2020 and 2050 policy targets.**

**CARB**

## World Carbon Emissions, 1980-2011





# The Keeling Curve

A DAILY RECORD OF ATMOSPHERIC CARBON DIOXIDE FROM SCRIPPS INSTITUTION OF OCEANOGRAPHY AT UC SAN DIEGO

Search

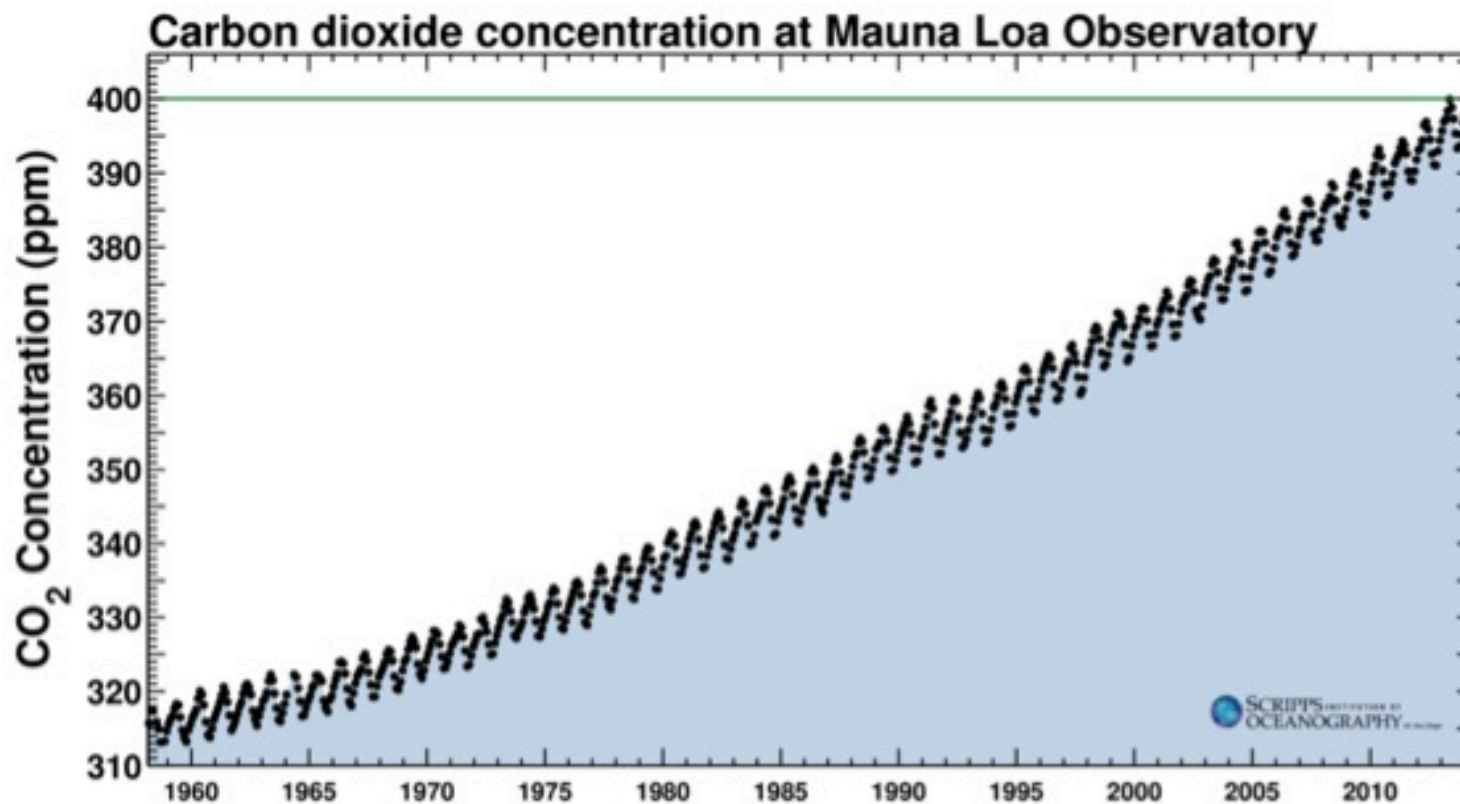
Latest CO<sub>2</sub> Reading

**401.67 ppm**

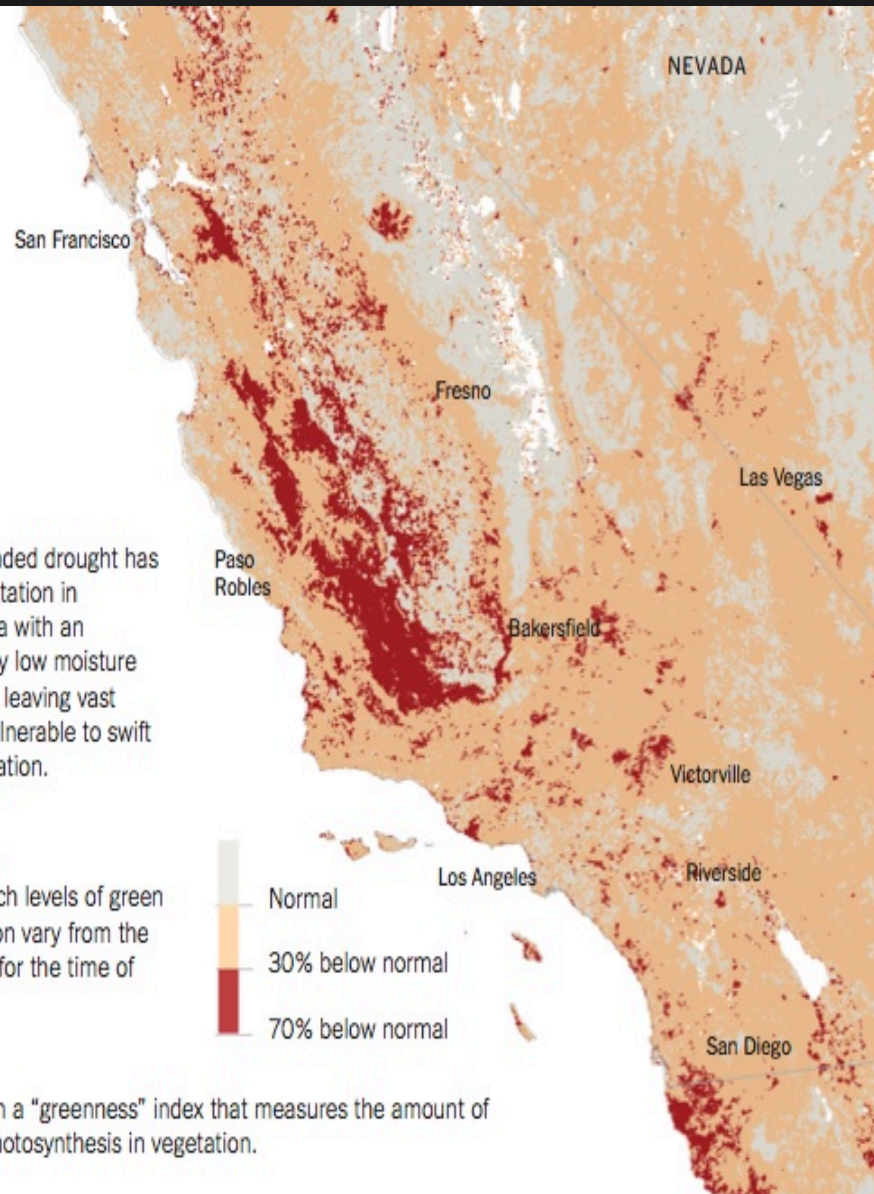
June 01, 2014

[June 01 instrument status](#)

Operational



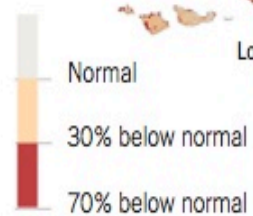
## Folsom Lake



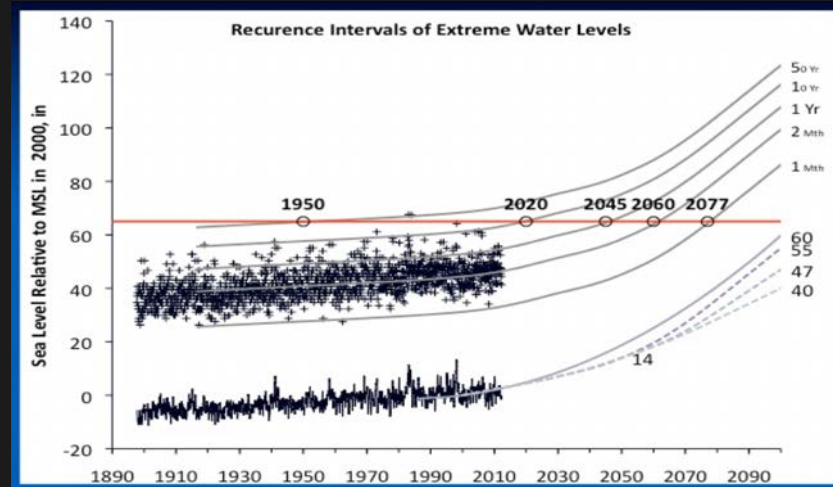
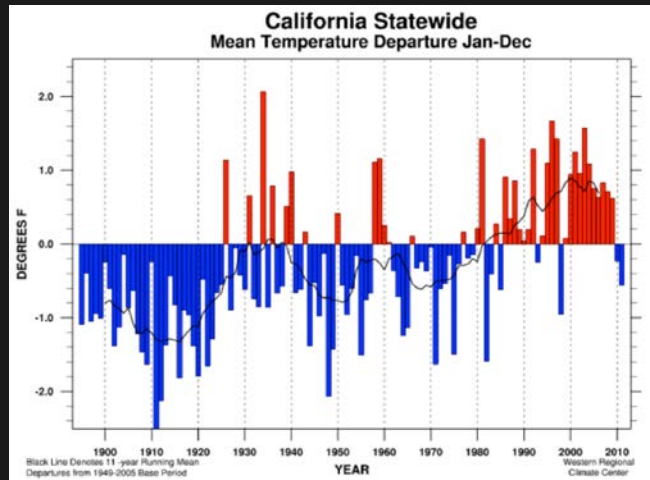
An extended drought has left vegetation in California with an unusually low moisture content, leaving vast areas vulnerable to swift conflagration.

### Dryness

How much levels of green vegetation vary from the average for the time of year



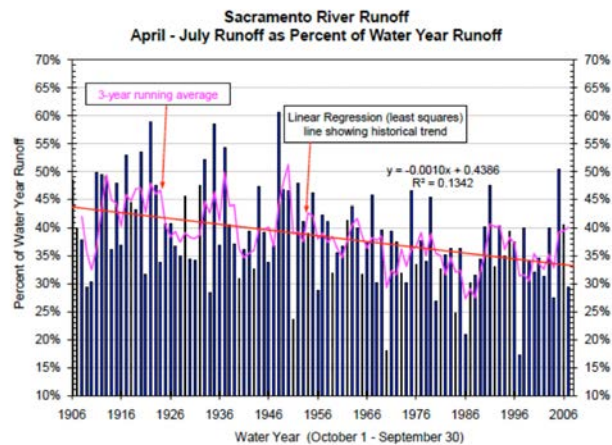
Based on a "greenness" index that measures the amount of active photosynthesis in vegetation.



Impacts on physical systems

#### ANNUAL SIERRA NEVADA SNOWMELT RUNOFF

Spring runoff in California has declined over the past century.



Source: DWR, 2008

## As Central Valley fog disappears, fruit, nut crops decline

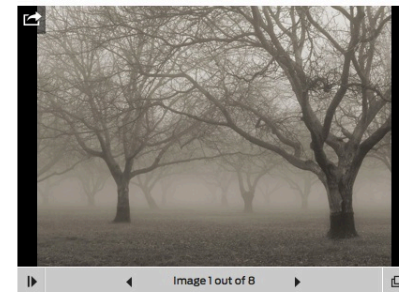
By Peter Fimrite

May 21, 2014 | Updated: May 22, 2014 9:32am

The soupy thick tule fog that regularly blanketed the Central Valley and terrorized unsuspecting motorists during the winter has been slowly disappearing over the past three decades, a UC Berkeley study has found.

The blinding mists may not be missed by those who remember white-knuckle drives in zero visibility and regular multiple-car pileups, but the fog dearth is bad news for farmers, according to a study published this month in the journal *Geophysical Research Letters*.

"It is jeopardizing fruit growing in California," said Dennis Baldocchi, a biometeorologist at UC Berkeley and lead author of the study. "We're getting much lower yields."



Anthony Dunn

Tule fog - essential to some crops - drifts through a walnut orchard near Meridian (Kern County) in the Central Valley.

## UK flooding: January rainfall breaks records for parts of England



REUTERS

EDITION: U.S. ▼

## More than 20 dead, thousands evacuated in Bosnia, Serbia floods

BY MARKO DJURICA

OBRENOVAC, Serbia | Sat May 17, 2014 2:14pm EDT

5 COMMENTS

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**Los Angeles Times**  
**Science / Environment**

**Irreversible  
collapse of  
Antarctic glaciers  
has begun, studies  
say**

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# Adapting to Rising Tides



San Francisco Bay  
Conservation and Development Commission



**NOAA Coastal Services Center**  
LINKING PEOPLE, INFORMATION, AND TECHNOLOGY

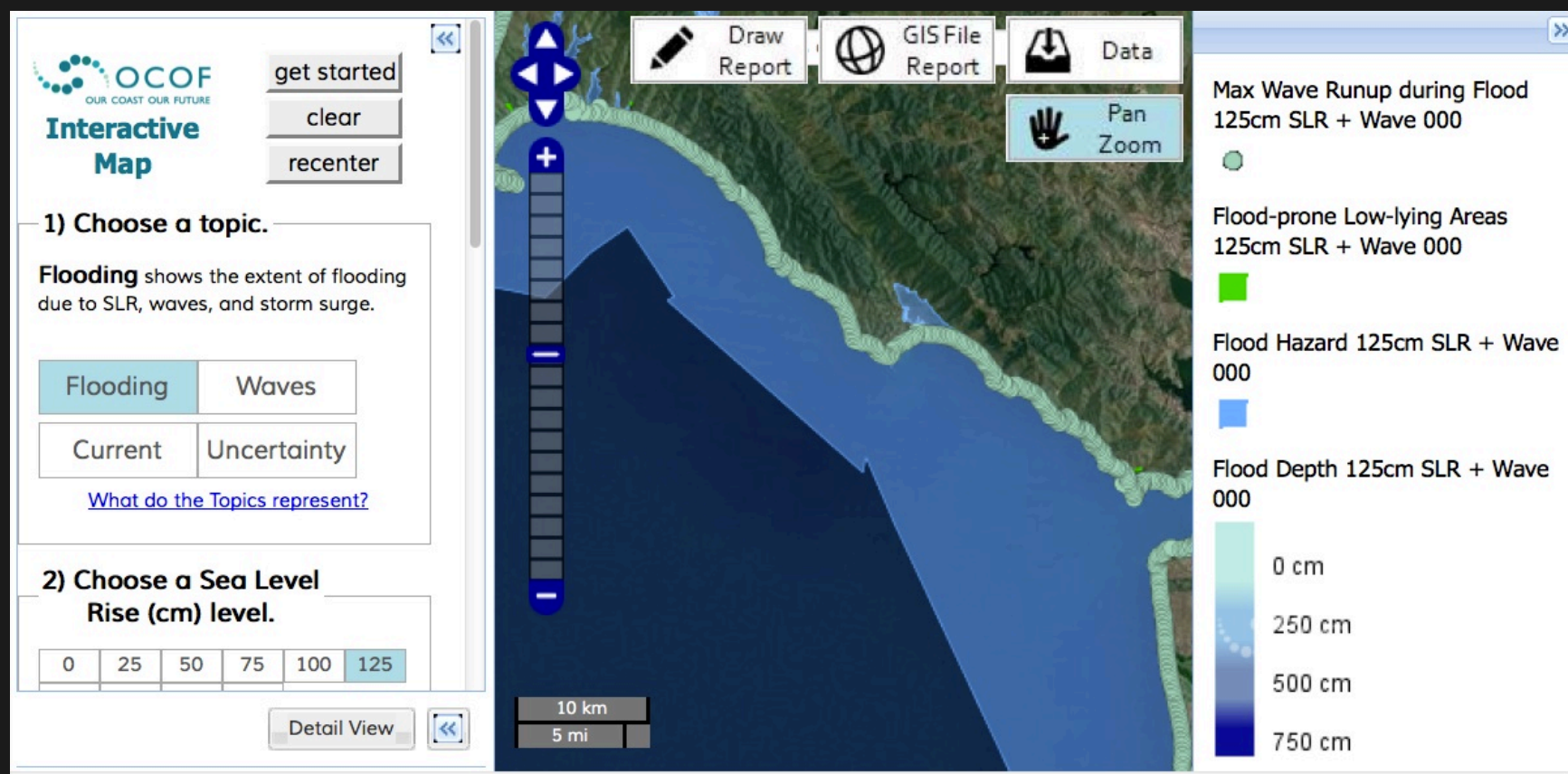
## Bay Area Housing and Community Multiple Hazards Risk Assessment

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**Adapting** to Rising Tides





# SILICON VALLEY 2.0



## SILICON VALLEY 2.0 - CLIMATE CHANGE PREPAREDNESS DECISION SUPPORT TOOL

[HOME](#)[SET UP](#)[CLIMATE CHANGE IN SCC](#)[VULNERABILITY](#)[RISK](#)[REPORTS & OUTPUTS](#)[MODEL CUSTOMIZATION](#)

### CLIMATE CHANGE VULNERABILITY ASSESSMENT MAPS FOR : SANTA CLARA COUNTY (COUNTY-WIDE)

VULNERABILITY  
ASSESSMENT  
OVERVIEW

MAPS

TABLES  
& CHARTS

HOW IS  
VULNERABILITY  
CALCULATED



#### MAP LEGEND:

##### CLIMATE VARIABLES:

SEA LEVEL RISE  
30 CM  
100-YEAR STORM SURGE

OPAQUE

TRANSPARENT

##### ASSETS:

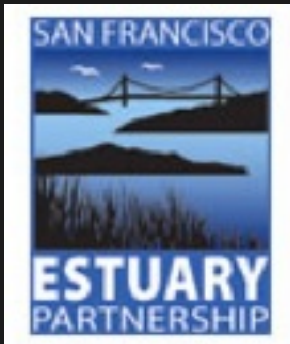
- ☒ BUILDINGS AND PROPERTIES:
- ☐ BUILDINGS
- ☒ PROPERTIES

##### ASSET VULNERABILITY RANKING:

RED HIGH  
ORANGE MODERATE  
YELLOW LOW  
WHITE NONE

OPAQUE

TRANSPARENT



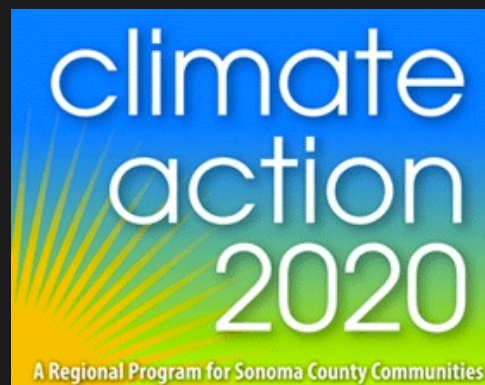


**cri**

**CLIMATE READINESS INSTITUTE**



*Securing our Future by Investing in our  
Water Resources, Environment & Community*



# The Resilient Communities Initiative (RCI)

Submitted by corrine on Thu, Mar 13th, 2:22pm

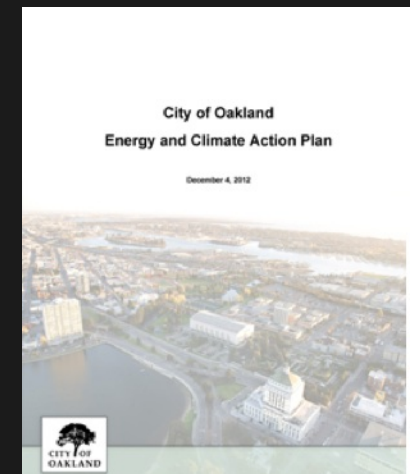
## Community-Led Resilience Planning in the Nine-County Bay Area



The Bay Area Resilient Communities Initiative (RCI) is creating a national model of resilience planning led by the communities most impacted by climate change and natural disasters for the benefit of all residents. Local governments lack the resources needed to fully prepare for climate change and natural disasters on their own. Working with community groups is a cost-effective and efficient way to develop policy and programs that work for all residents, especially those who are most vulnerable and hardest to reach.



# OAKLAND CLIMATE ACTION COALITION





BAY AREA  
AIR QUALITY  
MANAGEMENT  
DISTRICT

### **Air District Board Adopts Resolution**

**November 6, 2013**

- **Sets regional GHG reduction goal: 80% below 1990 levels by 2050**
- **Initiates regional climate protection planning process (Clean Air Plan)**
- **Directs staff to develop a work program to guide efforts in the near-term**





# CITIZENS' CLIMATE LOBBY

Political Will for a Livable World

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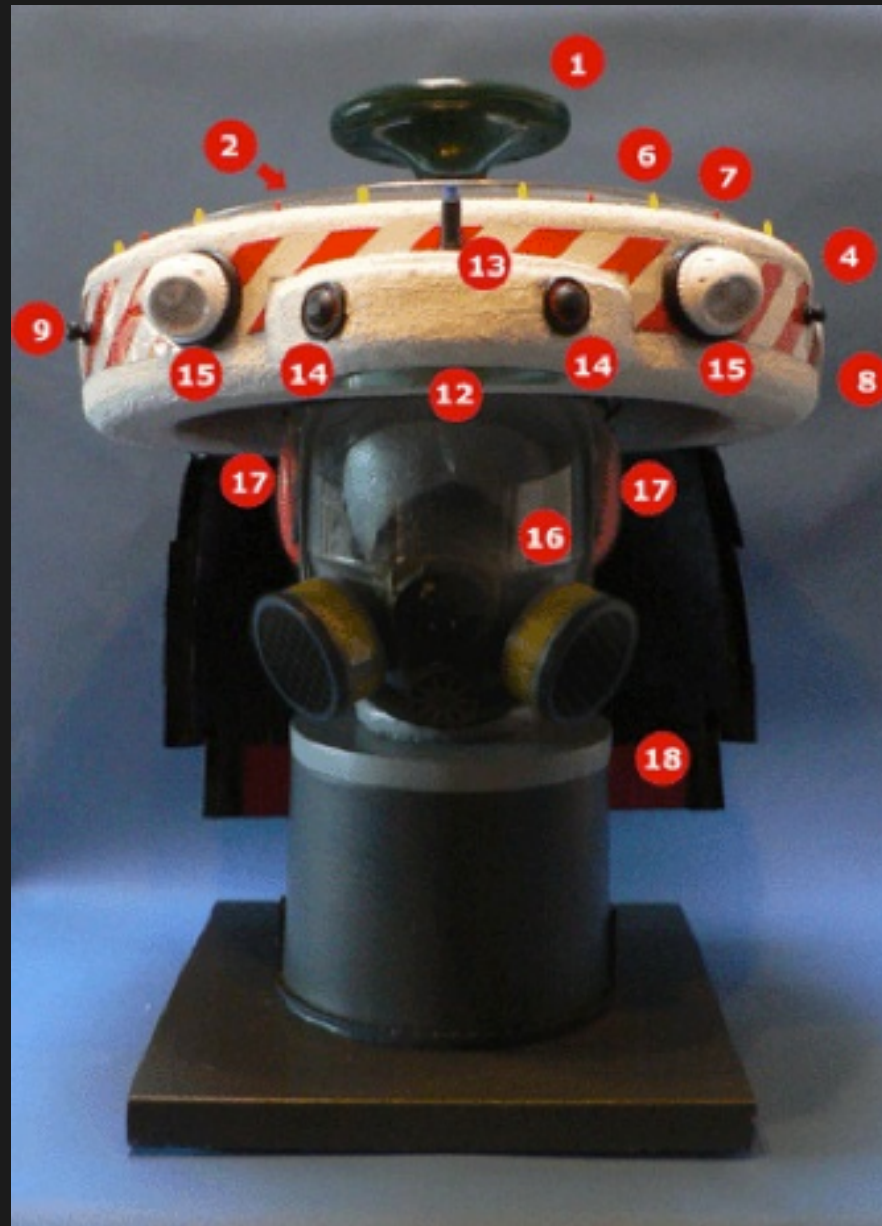


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# RISKY BUSINESS

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How much economic risk does the United States face from climate change?

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## “SB 375 for climate adaptation”—**Bay Area Adaptation Plan**

Mandated **GHG targets for regions or cities** to support state AB 32 efforts

**Integrate climate** into existing plans—general plans, hazard mitigation plans, capital improvement plans

Significant **dedicated climate funding sources** (e.g., vehicle license surcharge, cap & trade, gas tax, sales tax, parcel fee, power bill surcharge)

Centralized “one-stop” **climate science and information center** to assist local governments, nonprofits and other Bay Area stakeholders

Major **regional campaign** to build public/political support for stronger climate action

Major program to engage with and focus resources on the most **vulnerable communities and populations**

Regional **feedback loop/process** (scorecard) to measure, evaluate and report on Bay Area climate progress

Combine forces with other regions in California to **advocate for stronger national climate policies** that will drive climate action at all level

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